(19) World Intellectual Property Organization

International Bureau



(43) International Publication Date 21 July 2005 (21.07.2005)

PCT

(10) International Publication Number WO 2005/066238 A1

(51) International Patent Classification7: A61K 47/34, 9/00, 47/48, 9/16

C08G 63/91,

(21) International Application Number:

PCT/US2004/041194

(22) International Filing Date:

10 December 2004 (10.12.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 60/533,172

30 December 2003 (30.12.2003)

(71) Applicant (for all designated States except US): 3M INNOVATIVE PROPERTIES COMPANY [US/US]; 3M Center, Post Office Box 33427, Saint Paul, Minnesota 55133-3427 (US).

(72) Inventors; and

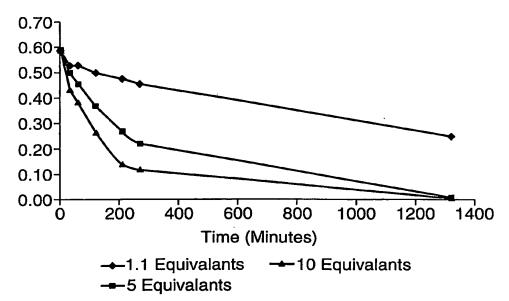
(75) Inventors/Applicants (for US only): CAPECCHI, John

T., [US/US]; 3M Center, Post Office Box 33427, Saint Paul, Minnesota 55133-3427 (US). STEFELY, James S., [US/US]; 3M Center, Post Office Box 33427, Saint Paul, Minnesota 55133-3427 (US).

- (74) Agents: PASTIRIK, Daniel R., et al.; Office of Intellectual Property Counsel, Post Office Box 33427, Saint Paul, Minnesota 55133-3427 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),

[Continued on next page]

(54) Title: MEDICINAL COMPOSITIONS AND METHOD FOR THE PREPARATION THEREOF



(57) Abstract: Methods for the manufacture of medicinal compositions are described. A method for the manufacture of a medicinal composition according to the invention comprises: (a) Providing a biocompatible polymer of the general formula -[O--R1--C(O)]_nwherein: "R1" is a linear, branched, or cyclic organic group, "n" is at least three, (b) Acylating the biocompatible polymer to provide an acylated biocompatible polymer and a mixed anhydride; (c) Reacting the mixed anhydride with a nucleophile to provide an acylated biocompatible polymer with a terminal carboxylic acid derivative capable of being chemically converted to an acid in the absence of water; (d) Converting the terminal carboxylic acid derivative to an acylated biocompatible polymer with a terminal carboxylic acid; and (e) Combining the acylated biocompatible polymer with a drug to provide the medicinal composition.

WO 2005/066238 A1



European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for all designations
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.